Panasonic ®

Personal Computer

OPERATING INSTRUCTIONS

CF-55 Series

Contents

Customer's Record

Model
No. ———————————

Serial
No. ———————————

or

Code
No. ———————————

Date
of
Purchase ———————————

Dealer's
Name ———————————

———————————

Dealer's
Address ———————————

———————————

Introduction

Thank you for purchasing the Panasonic CF-55 series computer. Please read the Operating Instructions thoroughly for proper operation of your new computer.

Illustrations in this Manual

NOTE	: **NOTE** provides a useful fact or helpful information.
CAUTION	: **CAUTION** indicates a condition that may result in minor or moderate injury.
WARNING	: **WARNING** indicates a hazard that may result in moderate or serious injury, or even death.
[Start]-[Shut Down]	: This illustration means to click [Start], and then to click [Shut Down]. (For some applications, you may need to double-click.)
[← Enter]	: This illustration means to press the [Enter] key.
[Alt]+[Ctrl]	: This illustration means to press [Alt], and while holding down on [Alt], to press [Ctrl].
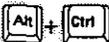
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CD Drive Caution

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS, ADJUSTMENTS OR ADOPTION OF
PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN
MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOUR-
SELF.
REFER SERVICING TO QUALIFIED PERSONNEL

AVERTISSEMENT!
CET APPAREIL UTILISE UN LASER.
L'UTILISATION DE COMMANDES OU DE RÉGLAGES OU
L'EXÉCUTION DE PROCÉDURES AUTRES QUE CELLES
SPÉCIFIÉES ICI PEUVENT PROVOQUER UNE EXPOSI-
TION À DES RADIATIONS DANGEREUSES.
NE PAS OUVRIR LES COUVERCLES NI ESSAYER DE
RÉPARER SOI-MÊME.
CONFIER TOUT TRAVAIL D'ENTRETIEN À UN PERSON-
NEL QUALIFIÉ.

WARNUNG!
DIESES PROUKT ERZEUGT LASERSTAHLUNG.
DURCHFÜHRUNG ANDERER VORGÄNGE ALS DER
HIER ANGEGEBENEN KANN ZU GEFÄHRLICHER
STRAHLUNG FÜHREN.
REPARATUREN DÜRFEN NUR VON QUALIFIZIERTEM
FACHPERSONAL DURCHGEFÜHRT WERDEN.

For U.S.A.

Federal Communications Commission Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with
the limits for a Class B digital device, pursuant to Part 15 of the
FCC Rules. These limits are designed to provide reasonable
protection against harmful interference in a residential
installation. This equipment generates, uses and can radiate radio
frequency energy and, if not installed and used in accordance
with the instructions may cause harmful interference to radio
communications. However, there is no guarantee that interference
will not occur in a particular installation. If this equipment does
cause harmful interference to radio or television reception, which
can be determined by turning the equipment off and on, the user
is encouraged to try to correct the interference by one or more
of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different
  from that to which the receiver is connected.
- Consult the Panasonic Service Center or an experienced ra-
  dio/TV technician for help.

Warning
To assure continued compliance, use only shielded interface
cables when connecting to a computer or peripheral. Also, any
changes or modifications not expressly approved by the party
responsible for compliance could void the user's authority to
operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation
is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including
    interference that may cause undesired operation.

For U.K.

Warning
This apparatus must be earthed for your safety.

To ensure safe operation the three-pin plug must be inserted only
into a standard three-pin power point which is effectively earthed
through the normal household wiring.

Extension cords used with the equipment must be three-core and
be correctly wired to provide connection to earth. Wrongly wired
extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not
imply that the power point is earthed and that the installation
is completely safe.
For your safety, if you have any doubt about the effective earthing
of the power point, consult a qualified electrician.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug
for your safety and convenience.
A 3 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the re-
placement fuse has a rating of 3 amps and that it is approved by
ASTA or BSI to BS 1362.

Check for the ASTA mark ◈ or the BSI mark ♡ on the body
of the fuse.

If the plug contains a removable fuse cover you must ensure that
it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a re-
placement cover is obtained.
A replacement fuse cover can be purchased from your local
Panasonic Dealer.
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR
THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE
SHOULD BE REMOVED AND THE PLUG CUT OFF AND
DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK
IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP
SOCKET.
If a new plug is to be fitted please observe the wiring code as
shown below.
If in any doubt please consult a qualified electrician.

Warning: THIS APPLIANCE MUST BE EARTHED.

Important

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow: Earth
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⊕ coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power.
Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.
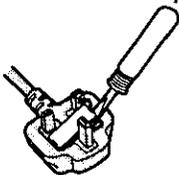
Warnings

● This equipment is not designed for connection to an IT power system.
(An IT system is a system having no direct connections between live parts and Earth; the exposed-conducive-parts of the electrical installation are earthed.
An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)

● Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored in it.
The battery should only be exchanged by service personnel.
Warning! Risk of explosion from incorrect installation or mis-application!

Warnung bezüglich der Lithiumbatterie (Sicherungsbatterie)

Lithiumbatterie!
Dieser Computer enthält eine Lithiumbatterie zur Sicherung von Datum und Uhrzeit der eingebauten Uhr sowie anderer Systemdaten im Speicher bei einer Unterbrechung der Hauptstromversorgung. Diese Sicherungsbatterie darf nur von Kundendienstpersonal ausgewechselt werden.
Warnung! Bei falschem Gebrauch besteht Explosionsgefahr!
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Avertissement concernant la pile au lithium (pile de sauvegarde)

Pile au lithium!
Le micro-ordinateur renferme une pile au lithium qui permet de sauvegarder certaines données comme la date et l'heure notamment. Elle ne devra être remplacée que par un technicien qualifié.
Avertissement! Risque d'explosion en cas de non respect de cette mise en garde!

Precautions

● Usage

Avoid Extreme Heat and Cold
Do not store or use the computer in locations exposed to heat, direct sunlight, or extreme cold. Avoid moving the computer between locations with large temperature differences.
Operation: 5 °C to 35 °C (41 °F to 95 °F)
Storage: -20 °C to 60 °C (-4 °F to 140 °F)

Avoid Direct Sunlight on the LCD Panel
The LCD panel should not be exposed to direct sunlight or ultraviolet light.

Avoid Humidity Liquids and Dust
Do not store or use the computer in locations exposed to high humidity, liquids (including rain) or dust.

Prevent Shock
Avoid subjecting the computer to severe vibrations or impact. Do not place the computer inside a car trunk.

Avoid Radio Frequency Interference
Do not place the computer near a television or radio receiver.

● Handling

Avoid Magnetic Fields
Keep the computer away from magnets.

Avoid Stacking
Do not place heavy objects on top of the computer.

Keep Small Objects Away
Do not insert paper clips or other small objects into the computer.

Do Not Disassemble the Computer
Do not attempt to disassemble your computer.

● Cables

Use of an interface cable longer than 3 m (9.84 feet) is not recommended.

Read Me First

Saving Data on the Hard Disk

- **Do not expose your computer to shock.**
  Shock may damage your hard disk or make your software applications and data unusable.
  Therefore, please use care when handling your computer.
- **Do not cut the power to your computer or adjust the angle of the display while the HDD indicator (目) is on or while software applications are running.**
  Properly shut Windows* down to avoid problems ([Start]-[Shut Down]).
  This computer houses the hard disk drive (HDD) in the back of the display, so if you adjust the angle of the display while the HDD indicator (目) is on, malfunction may result.
- **Save all valuable data to floppy disks.**
  To limit damage should trouble occur to your computer or should you inadvertently change or erase data, it is a good idea to make backups on floppy disks.
- **Use the security function for all important data.**
 ☞ page 14 - Security Measures

  * This computer uses Microsoft® Windows® 95 Operating System.

Saving Data on Floppy Disks

- **Do not cut the power to your computer or press the floppy disk drive (FDD) eject button while the FDD Indicator (⌷) is on.**
  Doing so may damage the data on the floppy disk and make the disk useless.
- **Use care when handling floppy disks.**
  To protect the data on your floppy disks or to prevent a floppy disk from becoming stuck in your computer, avoid the following:
  - Sliding the shutter on the floppy disk manually.
  - Exposing the disk to a magnetic field.
  - Storing the disk in locations prone to high temperatures, dampness, or dust.
  - Applying more than one label on the disk.
- **Confirm the contents of a floppy disk before formatting it.**
  Confirm that no important data is on the disk, because all data on the disk will be erased.
- **Use the write-protect tab.**
  This is a must for preserving important data. This prevents your data from being erased or overwritten.

  Write-protect Tab
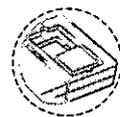
  Write Enable   **Write Disable**

Computer Viruses

- **Users are advised to purchase the latest versions of virus protection software and use them regularly.**
  We recommend you run the software:
  - When booting your computer.
  - After receiving data.
    We recommend that you check data received on floppy disks or from external sources, such as data downloaded from the Internet, e-mail, etc. (For compressed files, please uncompress them before running the software).

About Disk Utilities

- **Disk Utilities not conforming to FAT32 should not be used in the computer.**
  Running such programs may result in the incorrect display of HDD content or damage to data on the HDD. For more information, please read the "Technical Information" (☞ page 27).
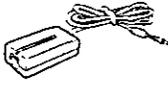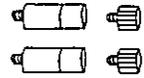
5

First-time Operation

It's now time to get started. Please read the steps below to help you learn what parts are included, and to gain an understanding of some basic computer-related operations.

1 Confirm the inclusion of all parts

Make sure the parts shown in the figure have been supplied. If any of them is missing or is not working properly, please consult your nearest Panasonic dealer.
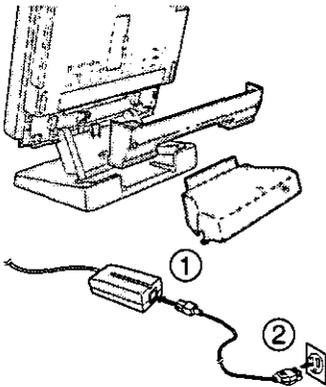
CAUTION

Please prepare one 2HD formatted floppy disk to create Firstaid FD of the Panasonic utilities. This Firstaid FD is to be used when reinstallation of the Panasonic utilities becomes necessary.

AC Adapter 1	AC Cord 1	Mouse 1	Screws 4
CF-AA159			

Firstaid CD 1	Operating Instructions 1	Windows 95 System Pack 1

2 Remove the rear panels to connect the AC adapter and other external devices
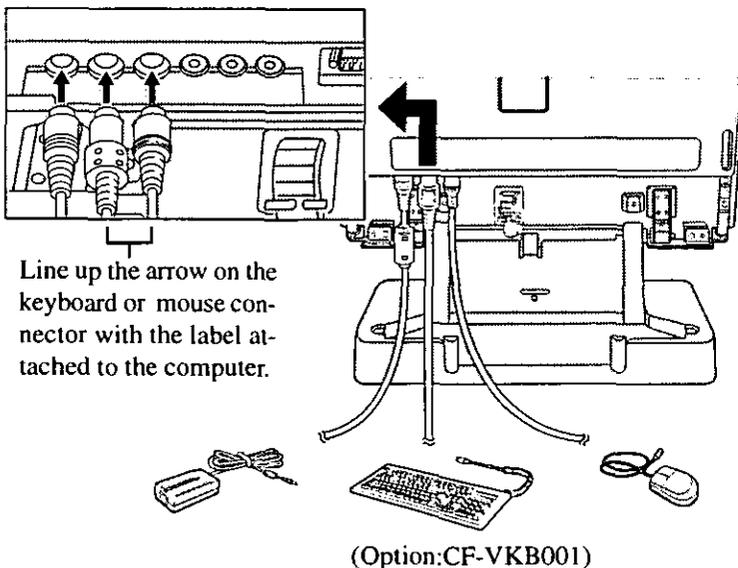
Remove the seal and then remove the back cover.

3 Connect the cables

Connect an AC adapter, a mouse, an optional keyboard and other optional devices (printer, serial devices etc.).

Adjust the angle of the display vertically, so that it is easy to see the connectors. (☞page 7)

Line up the arrow on the keyboard or mouse connector with the label attached to the computer.

(Option:CF-VKB001)

CAUTION

Be sure the AC adapter is connected until completing Step 9 on page 8.

Handling the AC adapter
- Do not twist or pull the AC power cord forcefully. Doing so may damage the connections.
- Use only the specified AC adapter (factory control number: CF-AA159) with your computer. Using an AC adapter other than the one supplied might damage the battery and/or the computer.
- When the DC plug is not connected to the computer, disconnect the AC cord from your AC wall outlet as well.
- Problems such as sudden voltage drops/surges may arise during periods of thunder and lightning. Since this could adversely affect your computer, an uninterruptible power source (UPS) is highly recommended.

Clamp
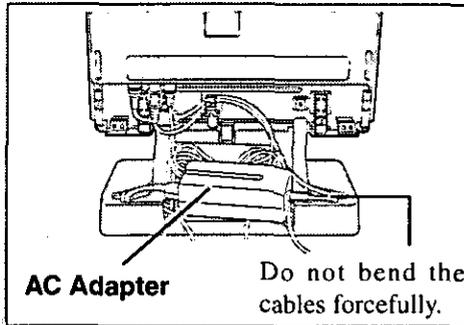
Only the cables for the AC adapter and/or keyboard should pass through this clamp.

Slacken here.

4 Connect and store the cables

Bundle the cables with the clamp. You can store the AC adapter in the cover.
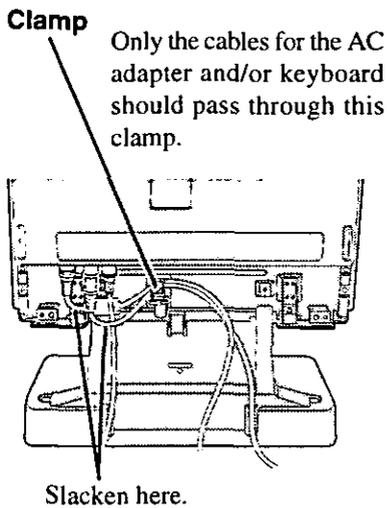
CAUTION

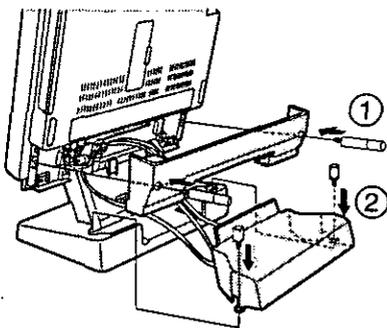When you store the AC adapter in the cover, do not twist the cables forcefully.

AC Adapter   Do not bend the cables forcefully.

5 Attach the cover by tightening the four screws by hand

①

②

NOTE

The cables should partially extend behind the cover.
If an external display is connected, the cable will extend through the bottom of the cover.

Slacken

Cover ——— ——— **External Display Cable**

Mouse, Keyboard, AC adapter Cable

Parallel, Serial Cable etc.
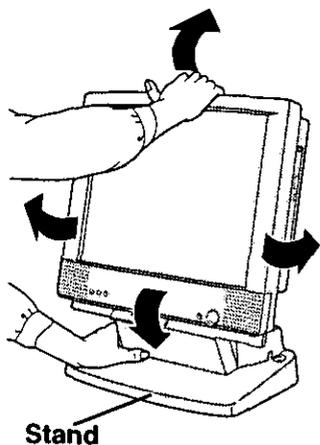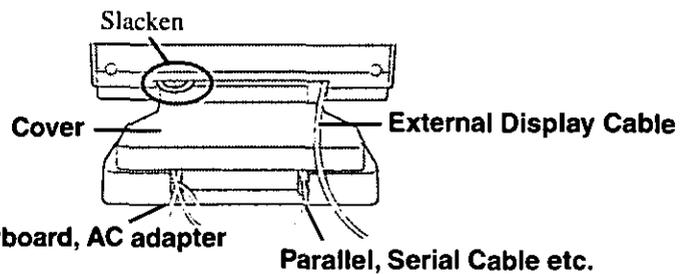
6 Adjust the angle of the display

Grasp the stand in hand and adjust by holding the upper part of the display.

CAUTION

● Place the computer on a flat and stable surface.
● Do not adjust the angle of the display while the HDD, FDD, CD-ROM indicators on.
● Do not place the computer near a television, radio receiver or magnet.
● Do not use the computer in a location where there is a lot of oily smoke or tobacco smoke. Doing so could shorten the service life of the CD-ROM drive.

Stand

7

First-time Operation

Press the power switch and hold until the power indicator goes on before releasing it.

Power Indicator
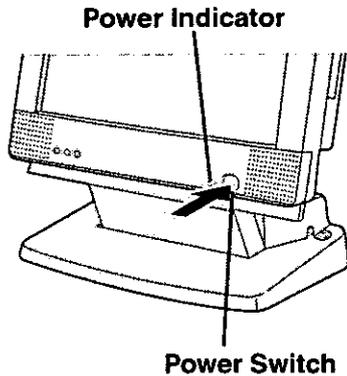
Power Switch

● Inserting a floppy disk

Shutter

Label-side

FDD Indicator

● Ejecting a floppy disk

Eject Button

7 Read the LIMITED USE LICENCE AGREEMENT (☞page 30)

Before removing the seal covering the power switch, please read the LIMITED USE LICENCE AGREEMENT. Removal of this seal indicates agreement to the terms specified. After you have agreed to the terms, you may turn your computer on.

CAUTION
- Do not press the power switch repeatedly.
- After you have turned your computer off, you must wait more than ten seconds before you can turn it back on.
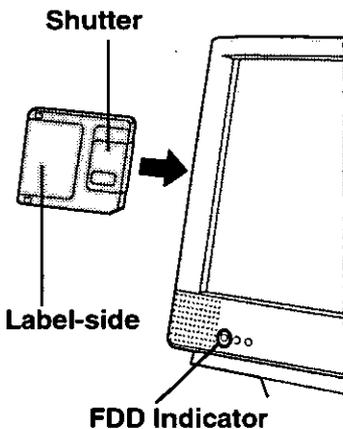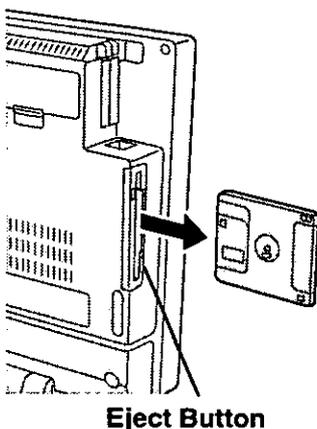- Remove the lens protect sheet attached to the lens in the CD drive.(☞page 9)

8 Set Windows up

The [Windows 95 Setup] will run after the computer is turned on. Simply follow the instructions on the screen.

NOTE
- Please read the supplemental "Windows 95 Setup Procedure" for a more detailed explanation (☞page 33).
- If the display or the sound quality is not right, you can adjust the brightness, contrast and volume (☞page 36).

Label side toward you while inserting the shutter-side head first.

CAUTION

When removing a floppy disk, the floppy disk may spring out of the floppy disk drive. It may not a malfunction.

9 Close the Internet Explorer 4.0 window

At the [Welcome - Microsoft Internet Explorer], select ☒ at the upper right portion to close the screen.

10 Double-click ⊚ (Panasonic Setup icon) on Windows

Be sure to have a blank floppy disk on hand then simply follow the instructions on the screen.

CAUTION
- It may take several minutes to reboot the computer.
- Please store the firstaid FD in a safe place. They will enable you to return your computer to factory default settings should any problems occur (☞ page 27).
- Do not remove the floppy disk while the FDD indicator (▯) is on, power down your computer or use the suspend function (☞ page 11).

NOTE
About Internet Explorer 4.0
Please select the item that you want to open from the menu on the [Welcome - Microsoft Internet Explorer].
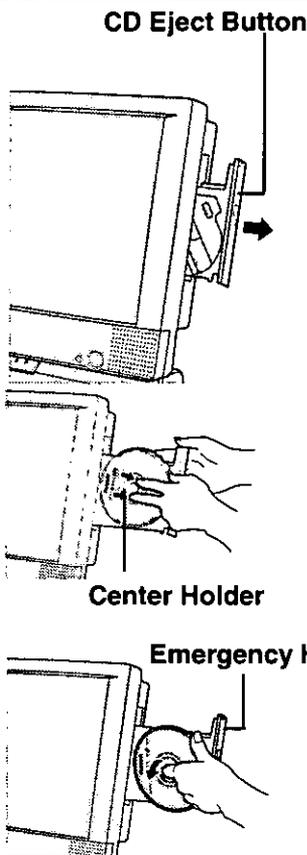**About the CF-55 series Readme**
Please read the Readme file, as it contains important information. To access it, please click [Start] - [Programs] - [Panasonic] - [Read me please].

> **This concludes the first-time use operation guidelines.**

CD-ROM Drive

Loading and Removing a CD

CD Eject Button

1 **Turn your computer on**

2 **Press the CD eject button**

The tray is partially extended automatically, slowly extend the remainder by hand.

(NOTE)

When you use the CD for the first time, remove the lens protect sheet attached to the lens in the CD-ROM drive.
While moving the computer, or if powered off for and extended period, attach this sheet to protect the lens.

3 ● **Inserting a CD**

Hold the CD so that your hand does not touch the data surface. With the label side facing up, set it into the center holder.

Center Holder

Emergency Hole

● **Removing a CD**

Place your finger on the center holder and lift up on the edge of the CD.

(NOTE)

To remove a CD when the computer is power off, insert a sharp object such as the bent-out tip of a paper clip into the emergency hole. Pushing it completely to the end will free the tray so that it can be pulled out.

4 **Close the tray**

Manually slide the tray closed.

(CAUTION)

- Do not leave the tray open or touch the lens.
- When the tray is open, applying too much force on the tray could damage it.
- Do not open the CD drive during CD access.
- Do not insert paper clips or other small objects into the CD drive.
- Be careful so that the computer does not fall when setting or removing a CD.
- Touching the data surface can make it dirty or even damage the CD. (For details on maintenance ☞page 22) Particularly a video CD is influenced by dirt or damage, so it may not play or work properly. Be careful not to scratch a CD when handling.
- Do not use a CD that has become deformed (warped), not completely round, etc.
- The image can not be displayed smoothly when MPEG data or video CD is played by the software.
- The image may be disturbed when a photo CD is played. In a case like this, the image will be displayed properly when the photo CD is played again.
- If the CD is removed during CD playback, the computer may not work properly.

(NOTE)

In order to use the CD-ROM drive in the MS-DOS mode, follow the additional steps below to install the necessary driver.

1 Select [Start] - [Shut Down] - [Restart in MS-DOS], click[OK]

2 Type the following.
    cd \ [↵]
    edit config.sys [↵]

3 Move the cursor to the line containing "ATAPICD.SYS" and delete the characters "REM" at the beginning of the line.
    device=c:\windows\command\atapicd.sys /d:mscd000

4 Press Alt -F, then "S" to save the file. Then press Alt-F, then "X" to exit the Edit program.

5 Type the following.
    edit autoexec.bat [↵]

6 Move the cursor to the line containing "MSCDEX.EXE" and delete the characters "REM" at the beginning of the line.
    c:\windows\command\mscdex.exe /d:mscd000 /L:L

7 Press Alt -F, then "S" to save the file. Then press Alt-F, then "X" to exit the Edit program.

8 Restart the computer.

Starting Up/Shutting Down

1 Turn your computer on

CAUTION
- Do not press the power switch repeatedly.
- After you have turned your computer off, you must wait more than ten seconds before you can turn it back on.

● If [Enter Password:] or 🔒 is displayed,

you must first enter your User Password (☞page 14).
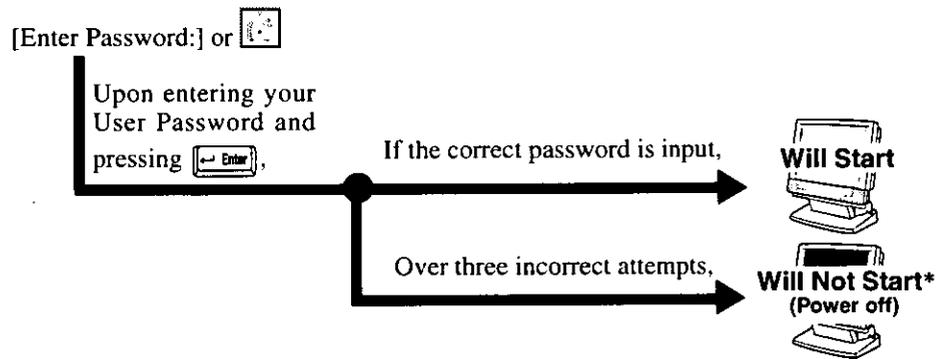
[Enter Password:] or 🔒

Upon entering your User Password and pressing [↵ Enter],

If the correct password is input, → **Will Start**

Over three incorrect attempts, → **Will Not Start***
(Power off)

*   If you are starting from the suspend mode (☞ page 11), if after three attempts the correct password is not input, or if no password is entered for about a minute, the computer returns to the suspend mode.

NOTE

If the display on the right appears,

the network password has been set. To read and write data to other computers, the correct password must be entered.
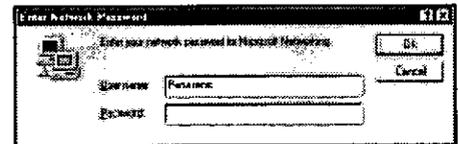
● When an application or file that was previously displayed appears on your screen,

this means the suspend or hibernation mode (☞page 11) has been set.

2 Select your application

You are able to start working on your computer.

NOTE

[System Devices] in [Device Manager] contains a device bearing an exclamation mark. This does not indicate a malfunction.

Using the Mouse

● **Clicking**   ● **Double-clicking** ● **Dragging**

(One tap)   (Two quick taps)   (While holding down the button, moving on the surface)

Shutting Down (power off your computer)

Shut Down Windows

What do you want the computer to do?
○ Shut down
○ Restart
○ Restart in MS-DOS mode

[OK] [Cancel] [Help]

1 **To shut down, save all data and select [Shut Down] from the [Start] menu**

NOTE

From the keyboard,

you may choose to press down on [⊞] or [Ctrl] + [Esc] and then select [Shut Down].
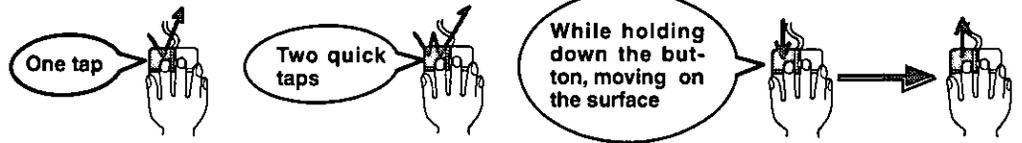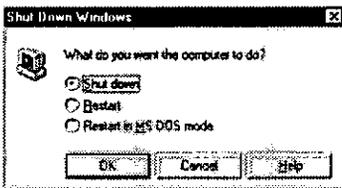
2 **Confirm shutdown**

Select [Shut down], then press [OK]. Your computer will power off automatically.

● **Restarting your computer (without shutting down)**

Select [OK] after selecting [Restart].

NOTE

To quickly resume computer operation after shutting down,
the suspend and hibernation functions are available (☞ below).

● **Restarting your computer in MS-DOS mode**

Select [OK] after selecting [Restart in MS-DOS].

NOTE

When returning to Windows 95 from the MS-DOS mode, type "EXIT" and not "WIN".
Returning to Windows 95 using the "WIN" command may result in a malfunction.

Starting Up Your Computer Quickly

If you want to immediately start up and continue an application after shutting down your computer, you can do so by using the suspend or hibernation function.

● **Differences between suspend function and hibernation function**

Function	Where data is saved to	Speed	Requires power supply
Suspend function	Memory	Fast	Yes (if power is cut, all data is lost)
Hibernation function	Hard disk	Somewhat slow	Power is not required to maintain data

Problems such as sudden voltage drops/surges may arise during periods of lightning. It is recommended to use the hibernation function when such incident is likely to occur. Since this could adversely affect your computer, an uninterruptible power supply is highly recommended.
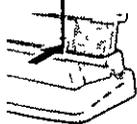
Starting Up/Shutting Down

Shutting Down

[Start] - [Suspend]

Suspend Mode

Power Switch

Do not touch the power switch while your computer is entering the hibernation mode

Hibernation Mode

● Using the suspend function

Select [Start] - [Suspend]

● Using the hibernation function

It is necessary to set the hibernation function using the Setup Utility

1 Run the Setup Utility (☞ page 34)

2 Using □ and □, select [Power Management] then press [← Enter]

3 Using □ and □, select [Power Switch], set [Hibernation] with □, then press [⊟]

4 Close the Setup Utility (☞ page 34)

(CAUTION)

- ● Save all data before powering off your computer
- ● When restarting from or shutting down to the suspend or hibernation mode, do not touch the mouse (serial or PS/2 type) There are cases where the mouse will fail to operate, you will have to restart your computer using the keyboard (☞page 11)
- ● Do not power off during the following periods (you may corrupt your data or file)
  - While the FDD indicator (□), HDD indicator (□) or CD-ROM indicator (□) is on
  - While playing/recording audio files.
  - While communications software is being used
- ● Do not use the suspend or hibernation function when using an OS other than Windows 95, the diagnostics program (DIAG55), or the Setup Utility, or when experiencing static electricity or noise
- ● If you hold down on the [Alt], [Ctrl] or [⇧shift] key while pressing the power switch to enter the suspend or hibernation mode, after resuming operation, you must press the same key For example, if you hold down on the [⇧shift] key while pressing the power switch, upon resuming, if you do not press the [⇧shift] key again, only capital letters will result from typing
- ● If your computer locks up, press the reset button. All data is lost when this button is pressed
- ● When a file in an external device such as an external hard disk or ATA card is opened, the suspend or hibernation function may not work In such cases, close the file
- ● SCSI cards may not recover properly after entering the suspend or hibernation mode If this occurs, restart the computer

Resuming Operation

Power Switch

If [Enter Password] or □ is displayed upon pressing the power switch, your password has been set (☞page 10)
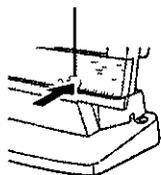
(CAUTION)

- ● Do not install or remove peripherals while your computer is in the suspend or hibernation mode, abnormal operation may result
- ● When operation resumes, serial devices such as a mouse or modem, or your PC Cards may not work In such cases, you will need to restart your computer or reinitialize the individual devices

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Conserving Power

Things to Remember

● **Leave your computer off when it is not in use** (☞page 11)

● **In the power management mode, the setting of [Advanced] is recommended** (☞below)
With the Setup Utility, you can set the [Advanced] mode.

● **Setting the suspend/hibernation timeout** (☞below)
The suspend or hibernation function (☞page 11) allows you to save power by automatically cutting off power when the computer is idle or there is no access to individual devices for 4 or 16 minutes.

Setting Power Management

(How to set [Advanced] and the suspend/hibernation timeout)

1 Run the Setup Utility (☞ page 34)

2 Using ⊡ and ⊡, select [Power Management] then press ⊡

3 Using ⊡ and ⊡, select [Power Saving] and set [Advanced] with ⊡
(To avoid setting the hibernation timeout, press ⊡ and proceed on to step **6.**)

4 Using ⊡ and ⊡, select [Power Switch] and set [Suspend] or [Hibernation] with ⊡

5 Using ⊡ and ⊡, select [Suspend/Hibernation Timeout], set either [4 min] or [16 min] with ⊡, then press ⊡

6 Close the Setup Utility (☞ page 34)

● **Power Management settings**

Power Management — Functions automatically set	CPU Speed Change Mode	HDD Motor Timeout	Display Off Timer
Advanced	Enable	5 min	5 min
Standard	Disable	Never	10 min
OFF	Disable	Never	Never

● CPU Speed Change Mode : When there are no operations, the CPU is automatically stopped.

● HDD Motor Timeout : When the hard disk drive is not accessed for more than five minutes, power to the HDD motor is cut off.

● Display Off Timer : When the computer is idle or a device is not accessed for five or ten minutes, power to the display is cut off.

CAUTION

When you need a network environment.
Be sure to disable the hibernation timeout settings with the Setup Utility .
After resuming operation from the hibernation mode, the network connection may be severed or the computer will not work properly.

In communications when a device like a high-speed modem or ISDN terminal adapter is connected to the serial port, etc.
There are times when high-speed communication is adversely affected if the power management function is enabled.

Key operation and music playback
When the power saving function is running, the keyboard and mouse operations may feel sluggish.
Also, music may not be play correctly when entering the standby mode during operation.

Security Measures

To prevent illegal data access or theft, or theft of your computer, various security measures are provided below.
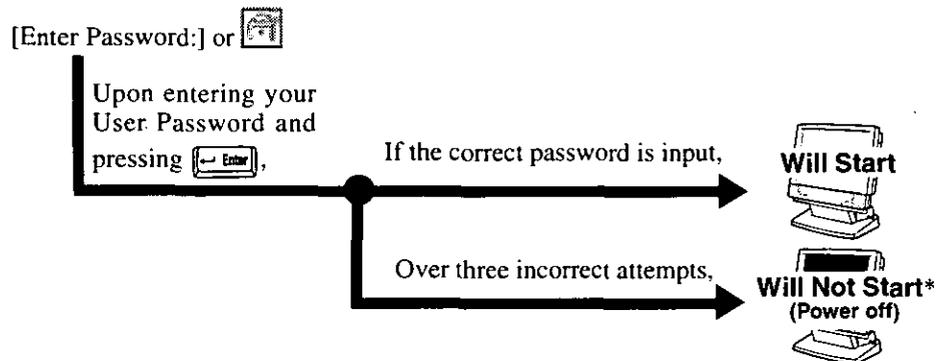
Situation	Function to use	Reference
You do not want your computer to be used without permission	User Password	☞below
Same as above, but while you're away temporarily	Coffee break Password	☞page 15
You want to prevent theft or damage to data by using a floppy disk	Prevent operation by floppy disk	☞page 16
You do not want your Supervisor Setup changed without permission	Supervisor Password	☞page 16
You want to prevent theft of your computer	Use a security lock	☞page 37

When you do not want your computer to be used without permission

Set the User Password.
Without the password, access to your computer is impossible.

● When the User Password is set

[Enter Password:] or 🖳

Upon entering your
User Password and
pressing 🔲,

If the correct password is input, **Will Start**

Over three incorrect attempts, **Will Not Start*** (Power off)

* If you are starting from the suspend mode (☞ page 11), if after three attempts the correct password is not input, or if no password is entered for about a minute, the computer returns to the suspend mode.

Setting the user password (enabling, changing, disabling)

1 Run the Setup Utility (☞ page 34)

2 Using 🔲 and 🔲, select [System Setup] then press 🔲

3 Using 🔲 and 🔲, select [User Password] then press 🔲

4 ● To enable or change your password

Enter your password at the [Enter User Password], then press 🔲.

> **CAUTION**
> ● Your password will not be displayed on the screen.
> ● Please limit your password to seven characters. Note that there is no distinction between upper and lower case letters.
> ● Only the alphabet keys and numeric keys can be used. (Note: the special keys (🔲, 🔲 etc.) cannot be used).
> ● Do not input your password while holding down on the 🔲 or 🔲.
> ● Use only the upper horizontal row of numeric keys to input user passwords. Keys on the right side of the enhanced keyboard can not be used.
> ● Do not forget your password. If a password is forgotten you will be unable to use your computer.

● To disable your password

Using the 🔲 and 🔲 keys, select [Delete User Password] then press 🔲. Go to step **7**.

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5 Re-enter your password at the [Enter User Password Again]
(This is for confirmation purposes.)

6 Using ⬆ and ⬇, select [Set User Password] then press [↵ Enter]

7 At the confirmation screen, press [↵ Enter]

8 Press [■] to end the password setting procedure

9 Close the Setup Utility (☞ page 34)

You do not want your computer to be used without permission while away temporarily

You should set the "Coffee break Password" (Note that you must first set the User Password). When you input your selected key combination, the computer locks (key input and use of a mouse are no longer possible).

● When the coffee break password is set
When leaving your desk,

[Alt] + [Ctrl] + [F9] (Example of a selected key combination.)
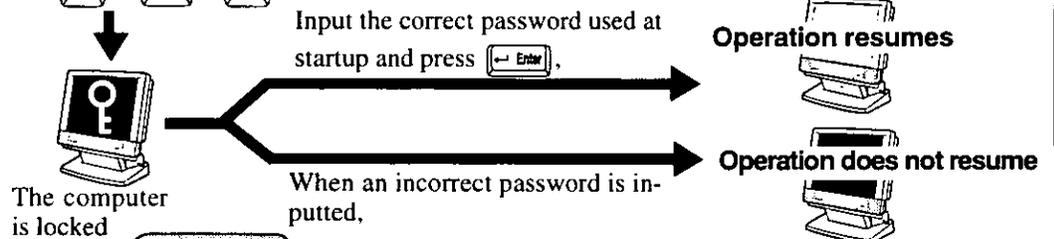
Input the correct password used at startup and press [↵ Enter],

Operation resumes

The computer is locked

When an incorrect password is inputted,

Operation does not resume

Setting the Coffee break Password (enabling or disabling)

1 Set the User Password (☞page 14 step 1 to 7), if it hasn't already

2 ● To enable the Coffee break Password
Using ⬆ and ⬇, select [Coffee break Password] and set [Enable] with ⬅.

● To disable the Coffee break Password
Using ⬆ and ⬇, select [Coffee break Password] and set [Disable] with ⬅.
Go to step 4.

3 Using ⬆ and ⬇ keys, select [Key Combination for Coffee break] then set your combination of keys with ⬅

4 Press [■] to end the password setting procedure

5 Close the Setup Utility (☞ page 34)

Security Measures

When you want to prevent theft of or damage to data by using a floppy disk

You may choose to protect the data on your computer from being accessed illegally or overwritten accidentally by a floppy disk. You can also set your computer to be unbootable from a floppy disk.

● Preventing the use of a floppy disk

Even when one tries to access a floppy disk,

This error message is displayed.

```
My Computer                    X
  (X)   A:\ is not accessible.
        The device is not ready.
     [ Retry ]   [ Cancel ]
```
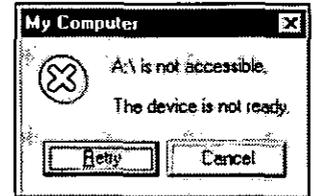
Procedure

1 Run the Setup Utility (☞ page 34)

2 Using 🔼 and 🔽, select [Supervisor Setup] then press 🔁 Enter

3 Using 🔼 and 🔽, select [Boot Up Drive] then set [Hard Disk Drive] with 🔽

> **⚠ CAUTION**
> When changing to [Hard Disk Drive] setting, to continue read/write operation from a floppy disk and to use the HDD to start, press 🔘 and go to step **5**.

4 Using the 🔼 and 🔽, select [Floppy Operation], set [Disable] with 🔽, then press 🔘

5 Close the Setup Utility (☞ page 34)

When you do not want your Supervisor Setup changed without permission

Set the Supervisor Password. After it has been set, no changes can be made to the Supervisor settings unless the password is entered.

● When the supervisor password is set

In the Setup Utility, if [Enter Password:] or 🔲 is displayed,

Input the correct supervisor password and press 🔁 Enter,

Supervisor Setup
Opened

When the supervisor password is incorrect,

Supervisor Setup
Can not be Opened
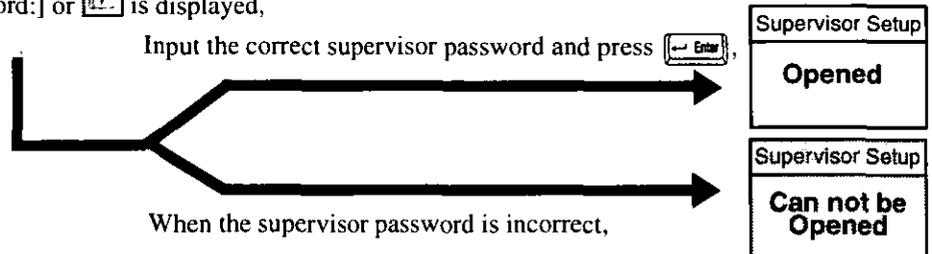
> **NOTE**
> You may wish to protect the User Password (☞ page 17).

Setting the Supervisor Password
(enabling, changing, disabling)

1 Run the Setup Utility (☞ page 34)

2 Using ⬆ and ⬇, select [Supervisor Setup] then press ⏎ Enter

3 Using ⬆ and ⬇, select [Supervisor Password] then press ⏎ Enter

4 ● To enable or change your supervisor password

Enter your password at the [Enter Supervisor Password], then press ⏎.

┌─(**CAUTION**)────────────────────────────────
│ ● Your password will not be displayed on the screen.
│ ● Please limit your password to seven characters. Note that there is no dis-
│   tinction between upper and lower case letters.
│ ● Only the alphabet keys and numeric keys can be used. (Note: the special
│   keys (⬆Shift, Ctrl etc.) cannot be used).
│ ● Do not input your password while holding down on the ⬆Shift or Ctrl.
│ ● Use only the upper horizontal row of numeric keys to input user pass-
│   words. Keys on the right side of the enhanced keyboard can not be used.
│ ● Do not forget your password. If a password is forgotten you will be un-
│   able to use your computer.
└──

● To disable your supervisor password

Using ⬆ and ⬇, select [Delete Supervisor Password] then press ⏎ Enter. Go to
step *7*.

5 Re-enter your password at the [Enter Supervisor Password Again]

(This is for confirmation purposes.)

┌─(**NOTE**)────────────────────────────────
│ **When you do not want the user password enabled, changed, or disabled**
│ **without permission,**
│   use ⬆ and ⬇ to select [User Password Protection], and set [Enable] with
│   ⬇.
└──

6 Using ⬆ and ⬇, select [Set Supervisor Password] then press ⏎ Enter

7 At the confirmation screen, press ⏎ Enter

8 Press ⎋ to end the password setting procedure

9 Close the Setup Utility (☞ page 34)

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Add-ons/Peripherals

Devices capable of being used by your computer are listed in the table below.

Device(s)	Where to connect	Reference
PC cards (Modem, LAN, SCSI etc.)	PC Card Slots	☞ below
Serial Devices (Mouse, Modem etc.)	Serial Port	☞ page 37
Extra Memory	RAM Module Slot	☞ page 20
External Display	Ext. Display Port	☞ page 21
Printer	Parallel Port	☞ page 21
Speaker/Headphone	Headphone Jack	☞ page 37
Audio device	Audio-in Jack	☞ page 37
Microphone	Microphone Jack	☞ page 37

Using PC Cards
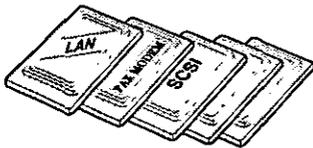
This computer has two PC Card slots. These slots conform to the PC Card Standard, and therefore, communications and SCSI devices can be utilized. The slot allows you to use two Type I or Type II cards (or one Type I and one Type II), or one Type III card.

Back of the card
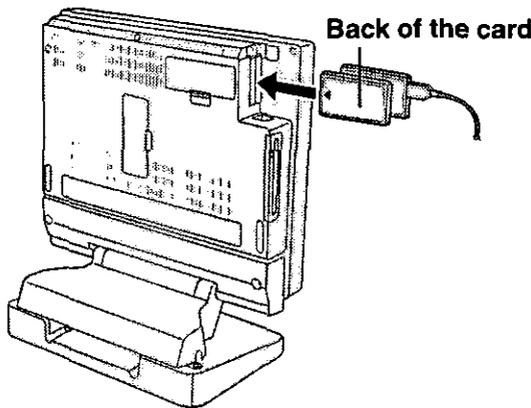
● Type I or II

Two cards can be used simultaneously.
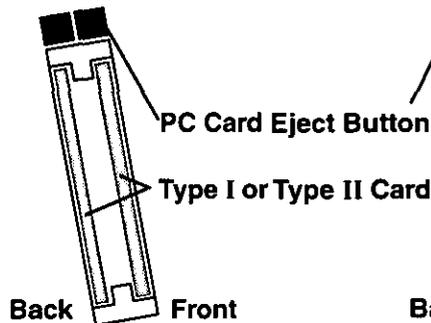
● Type III

One card can be used only in the back slot.

PC Card Eject Button

Type I or Type II Card

Type III Card

Back   Front   Back   Front
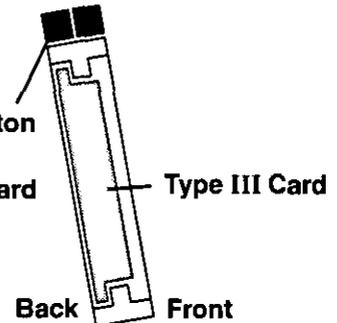
CAUTION

● Please check the PC cards' specifications. Be sure the total operating current does not exceed the specified limit, damage may result.
Allowable current (total for two slots) : 3.3 V: 400 mA, 5 V: 400 mA, 12 V: 120 mA
● There are times when both a Type I card and a Type II card will not work simultaneously.
● Some PC cards, example shown below, can not be used. The PC card's cable connector determines its physical compatibility.
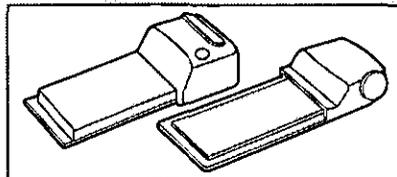
● SRAM and FLASH ROM cards (except for ATA interface) are not supported.
● When using a CardBus type card, use only that card; do not insert any other PC Cards.
● Only the back slot can support a Zoomed Video (ZV) card. When you use a Zoomed Video card, the driver software is needed.

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Installing/Removing the PC Card

1 Power off your computer (☞page 11)

Do not shut down using the suspend or hibernation mode.

> **CAUTION**
> - Do not install or remove peripherals while your computer is in the suspend or hibernation mode; abnormal operation may result.
> - Before removing a PC card, go to [Socket Status] (in [Start] - [Settings] - [Control Panel] - [PC Card (PCMCIA)]), select the PC card slot and press [Stop].

2 ● Removing the PC card (or the dummy card)
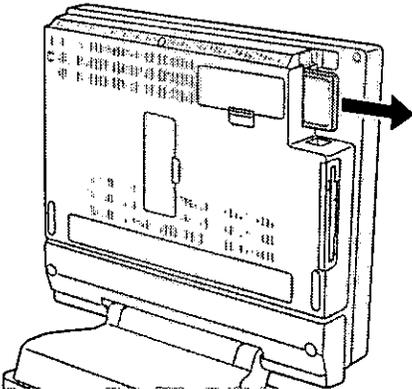
> **NOTE**
> Dummy cards are provided at the time of purchase. They provide protection for the PC card slots against such things as dust.

● Installing the PC card

Simply slide the PC card in until it snaps into place.
Please refer to the manual for each card on how to install the card.

Slacken here.

> **NOTE**
> In case of a PC card with a cable, you can pass the cable through the hole of the computer. Do not pass a bold cable forcefully.

Back of the card

> **CAUTION**
> After you insert a PC Card, a message may appear instructing you to insert the Windows 95 CD-ROM. If this happens, press the [Browse] button, then type "c:\windows\options\cabs". If you have a floppy disk with a driver, insert the disk in the floppy disk drive, then type "a:".
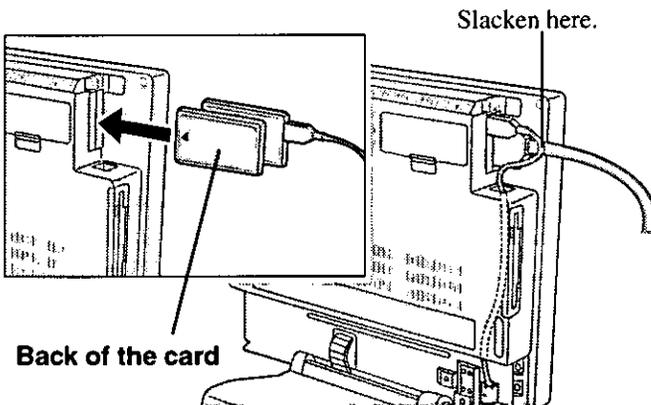
3 Turn your computer on

> **NOTE**
> - You may need to install a driver from the Windows 95 CD-ROM (included) or a PC Card's floppy disk. Simply follow the on-screen instructions and read the PC Card's operation manual on how to install the driver.
> **PhoenixCard Manager:**
> - Follow the installation procedure below only if you will be using the ZV card. Otherwise, do not perform the installation; abnormal operation may result.
>   *1* Set the items of [Sound Chip] to [Automatic (PnP)] in the Setup Utility.
>   *2* Select [Start] - [Run] and type "c:\util\drivers\pccard\disk1\setup.exe", press ⬚ OK ⬚, then follow the on-screen instructions.
> If the computer has been reinstalled, follow the instructions in "Installing PhoenixCard Manager95" on page 29.
> - After PhoenixCard Manager95 has been installed, make sure to power off the computer before installing or removing the card. Also, do not use the suspend or hibernation functions if the card is installed.

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Add-ons/Peripherals

> **CAUTION**
>
> RAM modules are extremely sensitive to static electricity. There are cases where static electricity generated by the human body has adversely affected such modules. In addition, it is easy to damage the RAM modules or internal components of the computer. Therefore, when installing or removing a RAM module, handle the module with extreme care.

Installing/Removing the RAM Module

1 Power off your computer (☞page 11)
Do not shut down using the suspend or hibernation mode.

> **CAUTION**
>
> Do not install or remove peripherals while your computer is in the suspend or hibernation mode; abnormal operation may result.

2 Remove the memory cover

> **CAUTION**
>
> Do not touch the terminals or internal components, insert objects other than the module, or allow foreign particles to enter. Doing so has been known to cause damage, fire or electric shock.
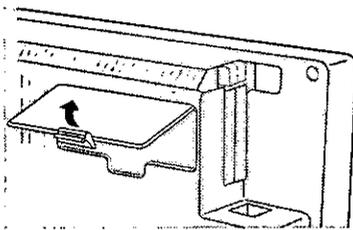
① Slide the module in at an angle.
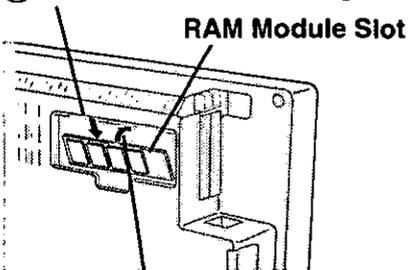
RAM Module Slot

② Snap the module into place by pushing it down.
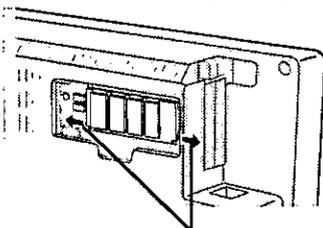
Open the left and right hooks.

Fix the hooks
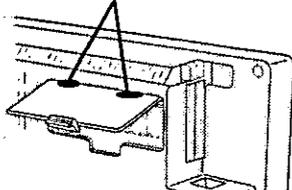
3 ● Installing the RAM module

RAM module specifications
144 pins, 60/70 ns, 3.3 V, SO-DIMM, EDO

31.7 mm (1.25")
or less
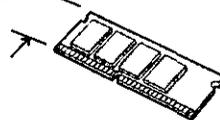
● Removing the RAM module

4 Put the cover back into place

5 Turn your computer on

Using an External Display
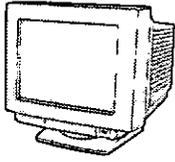
Some external display connectors do not match the computer's connector. In this case, consult your nearest Panasonic dealer.

Ext. Display Port
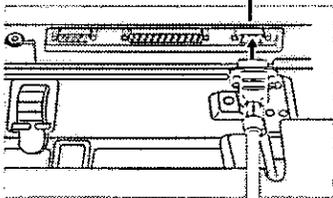
Be careful with the direction of the connector.

1 Power off your computer (☞page 11)

Do not shut down using the suspend or hibernation mode.

> **CAUTION**
> Do not install or remove peripherals while your computer is in the suspend or hibernation mode; abnormal operation may result.

2 Connect the external display to your computer

> **NOTE**
> For more detailed information, please refer to the operation manual for the external display.

3 Turn on the display, then turn on your computer

● **To display on both the LCD of your computer and the external display**

After this settings, [True Color (24bit)] can not be displayed on the external display.

1 Run the Setup Utility (☞page 34).

2 Using [↑] and [↓], select [System Setup] then press [← Enter]

3 Using [↑] and [↓], select [Display], set [Simultaneous] with [→] then press [□]

4 Close the Setup Utility (☞page 34).

5 Select your external display

Set your external display for [Models] in [Start] - [Settings] - [Control Panel] - [Display] - [Settings] - [Advanced Properties] - [Monitor] - [Change] - [Show all devices], then press [OK].

Using a Printer
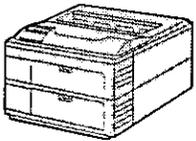
Parallel Port
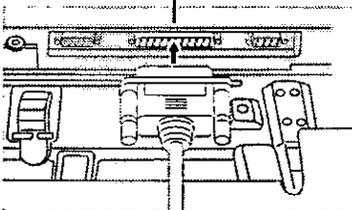
Be careful with the direction of the connector.

1 Power off your computer (☞page 11)

Do not shut down using the suspend or hibernation mode.

> **CAUTION**
> Do not install or remove peripherals while your computer is in the suspend or hibernation mode; abnormal operation may result.

2 Connect the printer to your computer

3 Turn on the printer, then turn on your computer

4 Setting your printer

Go to [My Computer] - [Printers]. Find your printer's icon, double-click on it, and click [File] - [Set As Default]. If no icon is available, select [Add Printer] and install the driver program.

> **NOTE**
> You may need to install a driver for your printer. Simply follow the on-screen instructions and read the printer's operation manual on how to install the driver.

Storage, Carrying and Maintenance

Computer

Maintenance

● Do not use solutions such as benzene or thinner. A soft, dry cloth is recommended.
● Cleaning the CD drive using a CD lens cleaner is recommended, not a liquid type cleaner.

Carrying

● Do not leave a floppy disk in the drive while transporting your computer.
● Do not carry your computer when it is ON.
● Do not hold the edges of the display. Doing so may damage the computer.

● Do not drop or hit your computer against solid objects.
● If you have occasion to ship your computer, make absolutely sure that it is packed with adequate protection.
● Insert the lens protect sheet in the CD drive.

Storage

● Do not place in areas exposed to direct sunlight or extremely high/low temperatures.
● Insert the lens protect sheet in the CD drive.

Mouse

If the mouse cursor does not move, or skip erratically, dust may have built up in the track ball well. Cleaning the mouse is recommended.

1 Remove the mouse
Power off your computer then remove the mouse.

2 Remove the cover and then remove the ball
Turn the mouse over, turn the ring counterclockwise while holding the two marks on the cover to unlock.
Remove the cover by sliding the mouse, then remove the ball.

Marks

3 Wash the ball and then wipe the cover and roller
After washing the ball in soapy water, rinse it in water thoroughly and wipe it with a dry, soft cloth.
Wipe the surface of the cover and the roller in the mouse with a dry, soft cloth as well.

4 Return the ball and cover
Return the ball to its original position, attach the cover and turn it clockwise to lock.

5 Return the mouse
Return the mouse to its original position.
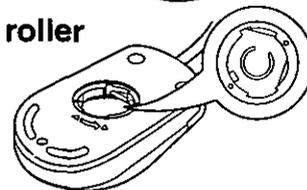
CD-ROM

● Do not allow CDs to become dirty or scratched.
● Do not place or store CDs in locations exposed to heat, direct sunlight, humidity or dust.
● Do not write on the surface of the CD with ball-point pen or other writing instrument.
● Do not drop, bend, or place heavy objects on top of CDs.
● If the CD is brought from cold into a warm environment, moisture may form on the disc. Wipe this moisture off with a soft, dry, lint-free cloth before using the CD.
● Cleaning the CD using a CD disk cleaner (LF-K022DC) is recommended once every 2 or 3 months.

If a CD gets dirty, after wiping the CD with a moist, soft cloth, wipe it with a dry cloth. Always wipe from the center toward the edge.
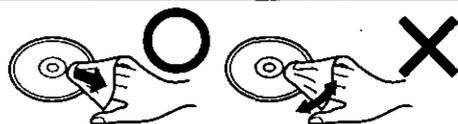
Computer Diagnosis

List of Error Codes

If a problem occurs with your hardware, [POST Start up Error(s)] is displayed along with the error code(s), follow the on-screen instructions.

Setup: Setup utility (☞page 34) is started. Run [Load Default Settings (PnP)].
Next the Setup Utility must be run again to input the appropriate operating environment settings.

Exit: Ignore the error message(s), and restart the computer.

Code		Description
062	Boot failure--default configuration used	Default configuration in use
101	System Board Failure	Interrupt controller failure
102	System Board Failure	Timer 2 test failure
106	System Board Failure	Diskette controller failure
114	Adapter ROM Error	Adapter ROM checksum error
151	System Board Failure	Real-time clock failure
161	Bad CMOS Battery	Dead battery
162	Configuration Change Has Occurred	Configuration error
162	Configuration Error	CMOS checksum error
163	Date and Time Incorrect	Real-time clock is not updating
173	Configuration Change Has Occurred	ROM configuration has changed
201	Memory Size Error	Memory size/data error
301	Keyboard Error	Keyboard failure
303	Keyboard Error	Keyboard controller failure
604	Diskette Drive Error	Diskette drive 0 configuration error
605	Diskette Drive Error	Diskette unlocked problem
1780	Hard Disk Error	Fixed disk 0 failure
1800	PCI Error	No more IRQs available
1801	PCI Error	No more room for optional ROM
1802	PCI Error	No more I/O space available
1803	PCI Error	No more memory (above 1 MB) available
1804	PCI Error	No more memory (below 1 MB) available
1805	PCI Error	Checksum error or 0 size optional ROM
8601	Pointing Device Error	Pointing device failure
19990301		Hard disk failure
I9990305		An operating system could not be found

Using the Self-diagnosis Program

Follow the procedure below to check whether each part of your computer is operating properly.

1 **To run the program, insert the Firstaid FD you created into the floppy disk drive, then turn your computer on**

2 **When the display below is shown, select [1. Boot]**
1. Boot
2. Restore HDD to factory default (For beginners)
3. Restore HDD to factory default (For advanced users)

3 **At the MS-DOS prompt (A:\WINDOWS\COMMAND>), input the following:**
diag55 [↵ Enter]
Follow the messages on the screen.

Dealing with Problems

When a problem occurs, please refer to this page. If you think it has to do with the software application you are using, please read the related manual. If you cannot find a solution to a problem, please consult your nearest Panasonic dealer.

● Starting Up

If the fan (☞ page 37) in the back of the computer does not work, it may be a malfunction. Consult your nearest Panasonic dealer.

The power indicator is not lit	● The AC adapter may not be properly connected. ● Pressing the reset button will solve the problem (☞ page 36).
The power indicator is flashing orange and power remains OFF	The CPU temperature is too hot. When the temperature of the CPU drops, power on again.
[Enter Password:] or ⌨ is displayed	Please input your password. If you have forgotten it, consult your nearest Panasonic dealer.
🖳 is not displayed 🖳 (Once this icon is executed, 🖳 will not be displayed later)	If you deleted 🖳 before you double-click 🖳, select [Start]-[Run], input [c:\util\avapp\psetup.bat], and press [OK]. Follow the message on the screen.
[Post Start Up Error(s)] is displayed	☞ page 23
The pre-memory count, Windows startup, or an operation is extremely slow	Run [Load Default Settings (PnP)] in the Setup Utility. This will restore the Setup Utility's settings to their default values (except the password settings), then the Setup Utility must be run once again for you to input the appropriate operating environment settings. (The processing speed depends on the application software used, so this operation may not cause the processing speed to increase.)
The date and time are incorrect	● You can set the date and time through [Date/Time] in [Start] - [Settings] - [Control Panel]. Another way is with the DATE and TIME commands in MS-DOS. ● If you continue to experience problems, the internal battery maintaining the clock may need to be replaced. Please consult your nearest Panasonic dealer.

● Display

Even after powering on, no display	● Adjust the brightness or contrast.
	● When purchasing the computer, the display setting has been preset for an external display.
	● When there is no display to an external display,
	  • Check your cable connection for an external display.
	  • Confirm an external display is on.
	● If your computer is connected to an external display and the internal LCD has been set to "off", and the unit is placed in the hibernation or suspend mode, the internal LCD will remain in the "off" mode if the external display is not connected when the computer is restarted. In this case, re-connect the external display and reboot the computer.

The power has not been cut, but after a certain period of time, there is no display	● Has your computer been set to the power-saving mode? To resume operation of your computer, press any key. ● To save power, your computer may have automatically entered the suspend or hibernation mode.
An afterimage appears	If an image is displayed for a prolonged period of time, an afterimage may appear. This is not a malfunction. The afterimage will disappear when a different screen is displayed.
The motion of a mouse cursor is not smooth	[Start]-[Settings]-[Control Panel]-[Mouse]-[Motion] and check [Show pointer trails].
The cursor does not move from mouse operations	● The Coffee break Password may be set. ● Check your mouse connections, and then reboot the computer from the keyboard. From the keyboard, you may choose to press down on ⊞ or [Ctrl] + [Esc] then select [Shut Down].

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● Disk Operations

Cannot read/write to a floppy disk	● Has the floppy disk been correctly inserted? ● Has the floppy disk been correctly formatted? ● Has the Setup Utility been used to set [Floppy Operation] to [Enable]?
Unable to write to a floppy disk	Is the floppy disk write-protected?
How to format a floppy disk is unclear	Select [Format] in [My Computer] - [3 1/2 Floppy (A:)] - [File]. After confirming the disk volume and format type, click [Start].
Unable to read/write to the hard disk	● Your drive or file may not have been properly set. ● Check to see if the hard disk is full. ● Your hard disk content may be corrupted. Consult your nearest Panasonic dealer.
The Tray of the CD drive does not extend	● Is the computer on? ● Extend the tray by using emergency hole. (☞ page 9)
Unable to read the CD	● Is the CD dirty, wet or scratched? (☞ page 22) ● Has the CD been inserted correctly? ● Check the specification of the drive or file.

● Character Input

Only capital letters are being input	If the CapsLk lamp is lit, the Caps Lock is ON. To switch it OFF, press [CapsLock].
How to input European characters (ß, à, ç) or symbols is unclear	Select [Start] - [Run], input [c:\windows\charmap.exe] and press [OK]. The Character Map will be displayed. Point to the desired font name and select it.

● Setup Utility

[Enter Password:] or [🔒] is displayed	Enter the User Password or Supervisor Password. If you have forgotten it, consult your nearest Panasonic dealer.
[User Password] cannot be selected	[User Password Protection] in [Supervisor Setup] may be enabled.
[Coffee break Password] or [Key Combination for Coffee break] cannot be selected	You need to set the User Password.
[Supervisor Password] cannot be set	If the User Password has been set first, the Supervisor Password can not be the same as the User Password. Another password needs to be entered.

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Dealing with Problems

● Connecting Peripherals

Your peripheral does not work. An error occurs while installing the driver	You need to use drivers conforming to Windows 95 Version 4.00.950B (OSR-2). Some earlier drivers will no longer work. For more information, please ask the source of the driver in question.
Unable to print	● Check the computer-printer connection. ● Make sure the printer is on. ● Make sure the printer is in the online state. ● Make sure paper is in the printer tray and there is no paper jam. ● Has the Setup Utility been used to set [Parallel Port (Address)] to [Automatic (PnP)], [378] or [3BC]?
The device connected to the serial port does not work	● Check the connection. ● Confirm that the device driver for the serial port works. Please refer to the reference manual for the device. ● Confirm that two mouse devices are not connected, one through the mouse jack and the other through the serial port. ● Has the Setup Utility been used to set [Serial Port] to [Automatic (PnP)] or [3F8]?
A PC card does not work	● Make sure the card is properly inserted. ● Confirm that the card conforms to the PC Card Standard. ● A driver for Windows 95 may need to be installed. ● Note that after a driver is installed, the computer must be rebooted. ● Check that the proper port settings have been made. ● Read the PC card's manual. Or, you may need to call the source of the PC card.
You do not know the available RAM module	☞ page 20
The RAM module has not been recognized	Make sure the RAM module has been properly inserted.
The address map for IRQ, I/O port address, etc. is unclear	Check the address map by going to [View Resources] in [Start] - [Settings] - [Control Panel] - [System] - [Device Manager] - [Computer] - [Properties].

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Technical Information

Network

● The network connection may be severed when entering the standby and suspend (hibernation) mode. Be sure to disable the hibernation timeout settings with the Setup Utility if you require a network environment.

● When the power saving function is running, communications software may malfunction. For example, communications may be halted if the suspend mode (hibernation) is activated.

About HDD DMA Transfer

Do not add the check mark ✓ to [DMA] in [Start] - [Settings] - [Control Panel] - [System] - [Device Manager] - [Disk drives] - [GENERIC IDE DISK TYPE**] - [Settings].
This may damage data on the hard disk.

FAT32

This computer uses a new, highly efficient file system called FAT32. Please note the following regarding FAT32.

● Some software will not run normally:
Do not run disk utilities and other software not compatible with FAT32. Doing so could cause incorrect information such as hard disk capacity to be shown or could destroy hard disk data.
Contact the dealer or other outlet for the software and obtain the latest version.

● Non-recognition from other operating systems:
You will not be able to view the contents of your hard disk from other operating systems. (For example, you will not be able to view the contents of your hard disk even when starting up using a floppy disk created with another computer.)
Other operating systems cannot therefore be installed. To install the operating system, please refer to the method listed below. If you are unsure about this explanation, do not proceed with installation of operating system.

①️ Back up the contents of your hard disk.
②️ Start up with the Firstaid FD.

③️ When the [Windows 95 Startup Menu] appears, select [1. Boot].
④️ Enter FDISK [Enter—].
⑤️ Select [3. Delete partition or Logical DOS Drive].
⑥️ Select [1. Delete Primary DOS Partition].
⑦️ Start up again following the instructions on the screen.

These steps will allow you to install most operating systems. The contents of the hard disk will be deleted. Always make sure to back up the hard disk beforehand.
The following steps will normally be unnecessary, however, if installation is not possible, try performing them.

⑧️ Start up again using the Firstaid FD to open FDISK in the same way.
⑨️ When [Do you wish to enable large disk support (Y/N)...?] appears on the first screen, press "N", then [Enter—].
⑩️ Select [1. Create DOS partition or Logical DOS Drive].
⑪️ Set the partition following the instructions on the screen and activate it.
⑫️ Start up again following the instructions on the screen.

Internet Explorer 4.0

Internet Explorer 4.0 places a tremendous load on the system in order to execute the wide variety of functions that it provides. As a result, some unexpected faults may occur.

Example: ● It takes a long time to reboot or the computer locks up.
● The software cannot be upgraded.
● A system module error occurs.

If any of these faults occurs, try using the software with some Internet Explorer 4.0 functions turned off. (See Internet Explorer Help for more details.)

Example: ● Close the channel bar.
● Close the welcome message.
● Set the wallpaper to "None".
● Uninstall Internet Explorer 4.0.

Reinstallation

When Windows is started up while pressing the [F8] key, the [Microsoft Windows 95 Startup Menu] is displayed. After reinstalling Windows, [Previous version of MS-DOS] also appears in this menu, however, do not select this item as MS-DOS is not installed.

Power saving function in the sound chip

The sound chip has its own power saving function. You can enable this function in the [OPL3-SAx power management] tab (select [Start] - [Settings] - [Control Panel] - [Power]).
In [Non Power Save mode], the power saving function is disabled. This is the default value.
In [Minimum level of power save], the power saving function is enabled. You may encounter problems, such as no sound from music CDs, and the keyboard's volume control ([Fn] + [⬆] [⬇]) will not function.
Do not select [Intermediate level of power save] or [Maximum level of power save] because noise is likely.

Reinstalling Software

Before Reinstallation

● Preparing

You will need the Firstaid FD (you earlier made copies of), Firstaid CD (included), Windows 95 CD (only use enclosed CD) and a blank floppy disk for the startup disk.

> **(NOTE)**
> If you have not created these disks, a message will appear at startup urging you to make backup copies. If there is no message, backup copies have already been created.

● Important

● Save all important data. If reinstallation is carried out, all data existing prior to the installation will be lost. The reinstallation will return the computer to factory condition.

● Be sure to remove all PC Cards and disconnect all peripherals before the reinstallation procedure.

Reinstalling

● Windows 95 (HDD format)

Two options are available, one for beginners and the other for advanced users.

● **For beginners:** **Returning to factory default condition.**

● **For advanced users:** **Returning drive C to factory default condition.**

> **(CAUTION)**
> ● The Advanced Users option should only be performed when the hard disk has been formatted into two or more partitions.
> ● If data on your hard disk is compressed, the data should be uncompressed.

1 Insert the "Firstaid FD", and turn the computer on, then run the Setup Utility program. (☞page 34)

2 Select [Load Default Settings (PnP)], then press [← Enter]. At the confirmation message, press [← Enter].

3 Close the Setup Utility (☞page 34); this screen should appear.

```
Microsoft Windows 95 Startup Menu
1. Boot
2. Restore HDD to factory default (For beginners)
3. Restore HDD to factory default (For advanced users)
Enter a choice: 1
```

4 **For beginners:** select [2. Restore HDD to factory default (For beginners)].

For advanced users: select [3. Restore HDD to factory default (For advanced users)]

At the confirmation message, press [Y]. Simply follow the on-screen instructions.

5 **<For beginners only>**
When your computer prompts you to insert the "Firstaid CD", please do so. When the computer reboots, the startup menu will appear, select 2 and continue to follow the on-screen instructions.

6 **<For beginners only>**
When your computer prompts you to insert the "Firstaid FD", press [Y]. When the computer reboots, the startup menu will appear, select 2 and continue to follow the on-screen instructions.

7 When your computer prompts you to insert the "Windows 95 CD", please do so.
Windows 95 has setup started. Follow the on-screen instructions.

> **(NOTE)**
> ● With the exception of the instruction below, please select all default values displayed by the Setup Wizard. Be sure to add the check mark ✓ for [Sound, MIDI, or Video Capture Card] at the [Analyzing Your Computer].
> ● Have a blank disk on hand to create a "Windows 95 Startup Disk". Immediately after creating this disk, enter the "Firstaid FD" into the floppy disk drive and press [OK]. (Note: A system error will result if the "Firstaid FD" is not inserted. If this occurs, insert the "Firstaid FD" and press [Retry].)

8 At the [Finishing Setup], remove the floppy disk and press [Finish]. Windows will restart after all the settings have automatically been made.

9 At the [Date/Time Properties], press [Close].

10 At the [Add Printer Wizard], press [Cancel].

11 When the display appears indicating the establishment of the system settings, press [OK].
The computer will reboot. (When the welcome screen appears, press [Close].)

● Power 1

12 Delete the check mark ✓ for [When powered by AC power] in [Start] - [Settings] - [Control Panel] - [Power] - [Disk Drives], then press [OK].

● Device Manager 1

13 Set [Start drive letter] and [End drive letter] in [Control Panel] - [System] - [Device Manager] - [CDROM] - [MATSHITA UJDCD8710] - [Settings] - [Reserved drive letters] to [L:], then press [OK] If the message to restart or shut down Windows appears, select [No].

● Sound driver

14 In [Control Panel] - [System] - [Device Manager], for each item in [Sound, video and game controllers] and [Ports (COM&LPT)], press [Remove] to delete it, then press [OK] to confirm the deletion. If the message to restart or shut down Windows appears, select [No].

15 Select [Close]. If the message to restart Windows appears, select [Yes]. If the message does not appear, select [Start] - [Shut Down] - [Restart the computer], then press [Yes].
If [Unknown Device] appears at the [Update Device Driver Wizard] while restarting, select [Next>].

16 Select [Other Locations...], input [c:\util\drivers\sound], then press [OK].

17 At the [Update Device Driver Wizard], select [Finish], and at the [Insert Disk] select [OK].

18 At the [Copying Files], type [c:\util\drivers\sound], then press [OK].

● Video driver

19 In [Control Panel] - [System] - [Device Manager] - [Display adapters] - [Standard PCI Graphics Adapter (VGA)] - [Driver] - [Update Driver], select [Yes (Recommended).] then press [Next>].

20 Select [Other Locations...], input [c:\util\drivers\video], then press [OK].

21 At the [Update Device Driver Wizard], select [Finish].

22 If the message to restart Windows appears, select [No], then select [Close] at the [S3 Inc. Virge MX (Panasonic Release) Properties].

● Device Manager 2

23 For each item in [System] - [Device Manager] - [Other Devices] and [PCMCIA Sockets], select [Remove] to delete it, then press [OK].

24 Select the item [System devices] - [PCI bus], then select [Remove], then press [OK]. If the message to restart Windows appears, select [No].

● System setup 1

25 In [Start] - [Run], input [c:\install.bat] then press [OK]. Windows restart.

26 When the [Version Conflict] appears, select [Yes]. If the message to restart Windows appears, select [Yes].

● Power 2

27 In [Start] - [Settings] - [Control Panel] - [Power] - [OPL3-SAx power management], set [Non Power Save mode] then press [OK].

● Device Manager 3

28 Delete the check mark ✓ for [Auto insert notification] in [Control Panel] - [System] - [Device Manager] - [CDROM] - [MATSHITA UJDCD8710] - [Settings], then press [OK]. Press [OK] at the [System Properties]. If the message to restart Windows appears, select [Yes].

● Display

29 Set [Super VGA 1024 X 768] for [Models] in [Start] - [Settings] - [Control Panel] - [Display] - [Settings] - [Advanced Properties] - [Monitor] - [Change], then press [OK].
After pressing [Close] at the [Advanced Display Properties], press [OK].

● System setup 2

30 Select [Start] - [Programs] - [MS-DOS prompt], then type the following.
> del \install.* [← Enter]
> exit [← Enter]

> **(NOTE)**
> Some Windows applications differ in use from their factory-set state. To add or delete items from the menu, select [Add/Remove Programs] in [Start] - [Settings] - [Control Panel].

Installing PhoenixCard Manager

Please prepare two 2HD formatted floppy disks to create backup disks for PhoenixCard Manager95.
Select [Start] - [Program] - [MS-DOS prompt], then type the following.
For PhoenixCard Manager95 disk1:
> xcopy c:\util\drivers\pccard\disk1 a:\ /s [← Enter]

For PhoenixCard Manager95 disk2:
> xcopy c:\util\drivers\pccard\disk2 a:\ /s [← Enter]

If necessary, install PhoenixCard Manager95 with the following steps.

1 Insert the "PhoenixCard Manager95 disk1".

2 Select [Start] - [Settings] - [Control Panel] - [Add/Remove Programs].

3 Select [Install/Uninstall] - [Install] then press [Next>].

4 Press [Finish], then follow the on-screen instructions.

Installing Internet Explorer 4.0

If necessary, install Internet Explorer 4.0 with the following steps.

1 Insert the Internet Explorer CD-ROM.

2 In [Start] - [Run], input [L:\setup.exe], then press [OK].
Follow the on-screen instructions.

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Windows 95 Setup Procedure

This procedure explains step 8 on page 8 in more detail.

1 Select settings for your region, then press [Next >]

2 Select your keyboard layout, then press [Next >]

3 Enter your name and your company's name, and then press
[Next >]
The License Agreement will be displayed.

4 After reading the agreement, select [I accept the agreement] or [I don't accept the agreement] then press [Next >]
If the former is selected, the [Certificate of Authenticity] will appear. If the latter is selected, the Windows setup will be aborted.

5 Input the Product Number written on the "Certificate of Authenticity" located in the "Introducing Microsoft Windows 95 book" that comes with this computer. After doing so, press
[Next >]

6 Press [Finish]

7 If the instruction to restart appears, press [OK]

8 Insert the correct time, date and time zone and click [Close]
You can also make these settings at a later time.

9 If you want to complete the printer settings, press [Next >]
Simply follow the instructions given on the display.
If not, press [Cancel]
You can also complete these settings at a later time.

Setup Utility

To run the Setup Utility, you need to restart your computer. ➡ Upon seeing this message | Press F1 for Setup | ➡ press [F1]
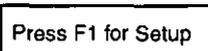
NOTE

● Setup Utility does not run if you delay pressing [F1]. Restart Windows.
● If [Enter Password:] is displayed, enter your password.

<Main Screen>

```
          Setup Utility

•System Setup ─────────────────
•Power Management ─────────────
•Supervisor Setup ─────────────

 Save Settings
 Restore Settings ──────────────
 Load Default Settings (PnP)──────
 Load Default Settings (Non-PnP)──

 Exit Setup
```

Return to the state existing at the time of Setup Utility startup, or to the settings saved with [Save Settings].

Set Default settings.
• (PnP) denotes "for Windows 95".
• (Non-PnP) denotes "for other than Windows 95".
• When the Supervisor Password has been set, input of the password is necessary.

Program Completion
• Hibernation settings (☞ page 11)
• Power Management settings (☞ page 13)
• Security Settings (☞ page 14)
• Add-ons/Peripherals Settings (☞ page 18)
After you have completed all settings, you may exit the Setup Utility program.

NOTE

Key Operations

[F1]: To display the corresponding "help" file.

[← Enter]: To make a selection.

[Esc]: To display previous screen (To exit the program at the main screen).

[↑][↓]: To move among the items.

[→][←]: To move among the values of each item.

[F5]: To return to the setting before a change.

[F6]: To set the default values.

```
          Exit Setup

 Settings were changed.
 Do you want to save them?

 Yes, save and exit the Setup Utility.
 No, exit the Setup Utility without saving.
 No, return to the Setup Utility.
```

NOTE

If the User Password has been set, the password must be entered before Windows can start.

(The display may be different if no changes to the settings are made.)

```
┌─────────────────────────────┐
│        System Setup         │
├─────────────────────────────┤
│ Speaker           [Enable]  │
│ Display*¹         [External Monitor]*¹
│                             │
│ • User Password ──────────  │
│   Coffee break Password*²  [Enable]
│   Key Combination for Coffee break  [Alt+Ctrl+F9]
└─────────────────────────────┘
```

Setting the User Password (☞ page 14)
(Unable to select when the User Password Protection has been set.)

```
┌──────────────────────────────────────┐
│              User Password            │
├──────────────────────────────────────┤
│ User Password Status        Enable    │
│                                        │
│ Enter your new User Password twice.    │
│                                        │
│ Enter User Password        [       ]  │
│ Enter User Password Again  [       ]  │
│                                        │
│ Set User Password                      │
│ Delete User Password                   │
└──────────────────────────────────────┘
```

```
┌─────────────────────────────┐
│       Power Management       │
├─────────────────────────────┤
│ Power Saving       [OFF   ]  │
│  CPU Speed Change Mode  Disable ─┐
│  HDD Motor Timeout     Never     │
│  Display Off Timer     Never  ───┘
│                             │
│ Power Switch       [On-Off ]│
│                             │
│ Suspend/Hibernation Timeout*³  Never │
└─────────────────────────────┘
```

☞ page 13

Sets the function of the power switch.

Able to set how long the interval will be until hibernation.

```
┌─────────────────────────────────────────┐
│              Supervisor Setup            │
├─────────────────────────────────────────┤
│ Parallel Port (Address)       [Automatic (PnP)]
│ Parallel Port (Data Direction) [Bidirectional  ]
│ Serial Port                   [Automatic (PnP)]
│ Sound Chip                    [Enable]
│  Sound Blaster Compatible I/O [Automatic (PnP)]
│  WSS CODEC I/O                [Automatic (PnP)]
│  Sound IRQ-A                  [Automatic (PnP)]
│  Sound IRQ-B                  [Automatic (PnP)]
│  Sound DMA-A                  [Automatic (PnP)]
│  Sound DMA-B                  [Automatic (PnP)]
│ Floppy Operation              [Enable]
│ Boot Up Drive                 [FDD→HDD]
│ • Supervisor Password ──────
│ User Password Protection      [Disable]
└─────────────────────────────────────────┘
```

Setting Supervisor Password (☞ page 17)

```
┌──────────────────────────────────────┐
│           Supervisor Password         │
├──────────────────────────────────────┤
│ Supervisor Password Status     Enable │
│                                        │
│ Enter your new Supervisor Password twice.
│                                        │
│ Enter Supervisor Password        [     ]
│ Enter Supervisor Password Again  [     ]
│                                        │
│ Set Supervisor Password                │
│ Delete Supervisor Password             │
└──────────────────────────────────────┘
```
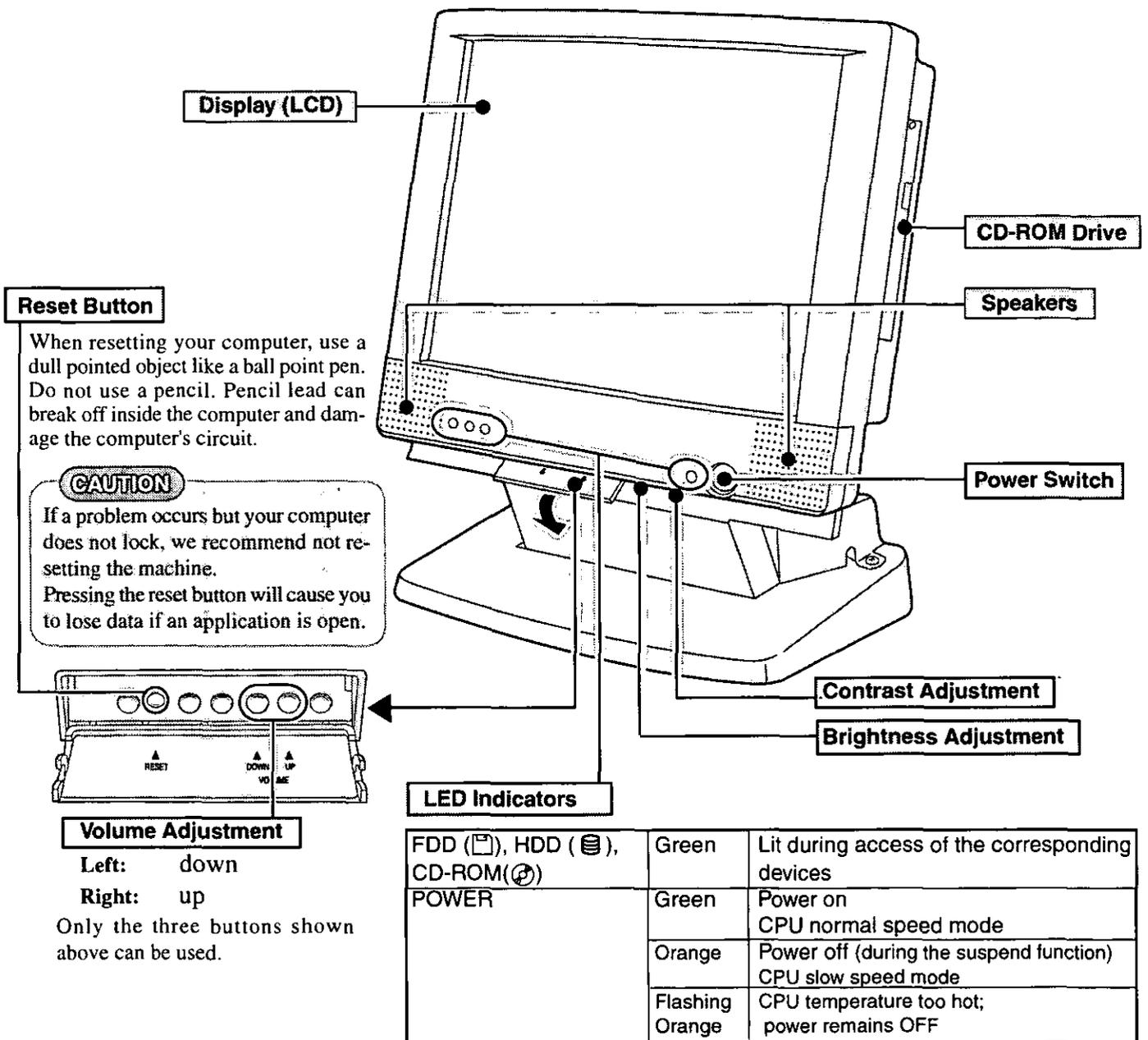
*¹ When no external display is connected, display will be through the LCD.

*² Can only be selected when the User Password has been set.

*³ Can only be selected when [Power Switch] has been set [Suspend] or [Hibernation].

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Names and Functions of Parts

● Front

Display (LCD)

CD-ROM Drive

Speakers

Reset Button

When resetting your computer, use a dull pointed object like a ball point pen. Do not use a pencil. Pencil lead can break off inside the computer and damage the computer's circuit.

CAUTION

If a problem occurs but your computer does not lock, we recommend not resetting the machine.
Pressing the reset button will cause you to lose data if an application is open.

Power Switch

Contrast Adjustment

Brightness Adjustment

RESET   DOWN UP
         VOLUME

Volume Adjustment

Left: down
Right: up

Only the three buttons shown above can be used.

LED Indicators

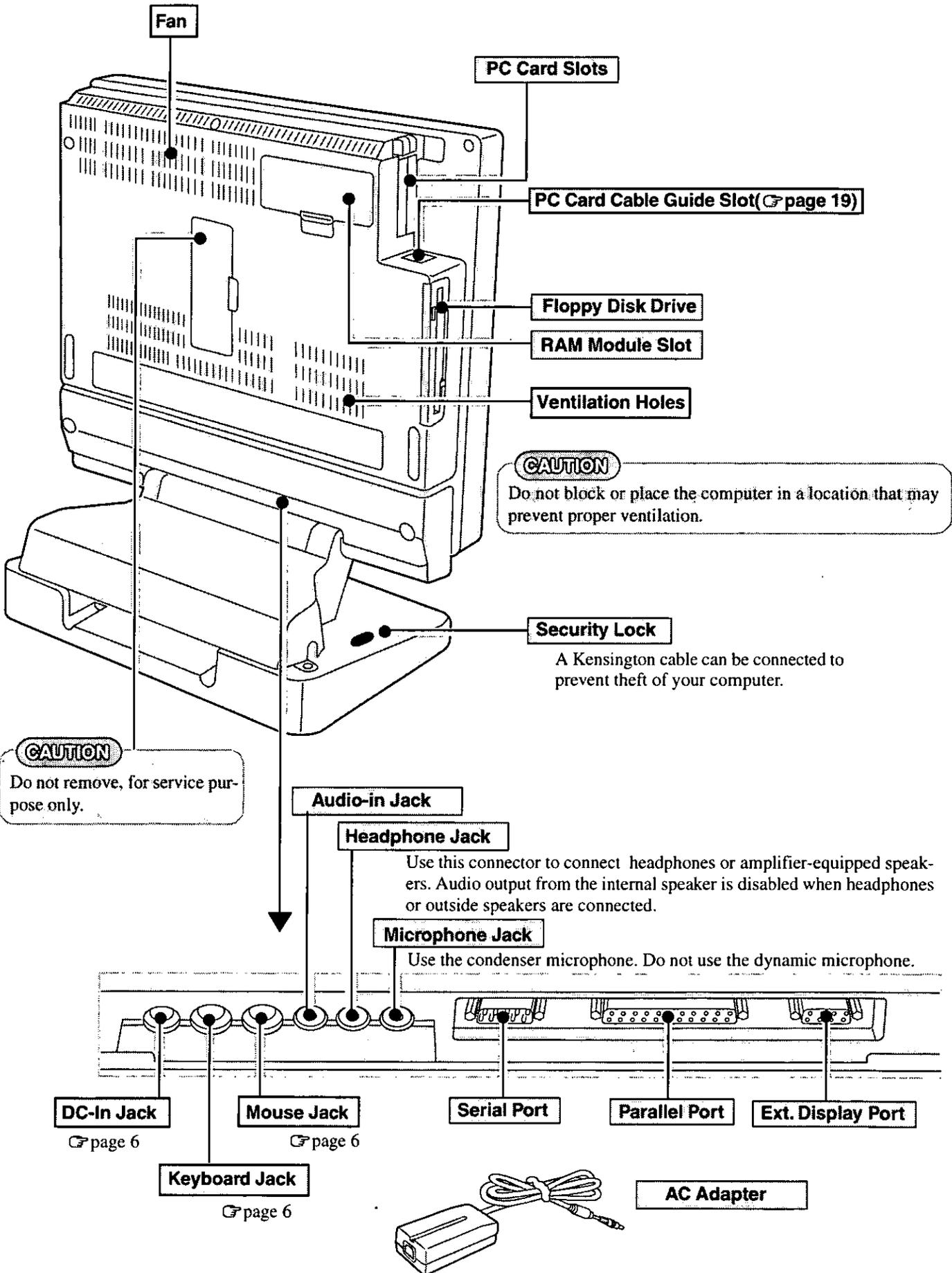| FDD (□), HDD (🖴), CD-ROM(💿)	Green	Lit during access of the corresponding devices
POWER	Green	Power on CPU normal speed mode
	Orange	Power off (during the suspend function) CPU slow speed mode
	Flashing Orange	CPU temperature too hot; power remains OFF

NOTE

When the temperature of the CPU rises, the processing speed is automatically reduced to protect the CPU from overheating. When the temperature of the CPU drops, the normal processing speed is automatically restored.

● Back

Fan

PC Card Slots

PC Card Cable Guide Slot(☞page 19)

Floppy Disk Drive

RAM Module Slot

Ventilation Holes

CAUTION
Do not block or place the computer in a location that may prevent proper ventilation.

Security Lock

A Kensington cable can be connected to prevent theft of your computer.

CAUTION
Do not remove, for service purpose only.

Audio-in Jack

Headphone Jack

Use this connector to connect headphones or amplifier-equipped speakers. Audio output from the internal speaker is disabled when headphones or outside speakers are connected.

Microphone Jack

Use the condenser microphone. Do not use the dynamic microphone.

DC-In Jack
☞page 6

Mouse Jack
☞page 6

Serial Port

Parallel Port

Ext. Display Port

Keyboard Jack
☞page 6

AC Adapter

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Specifications

● Main Specifications

Model No.		CF-55M5M8AM
CPU		Pentium® Processor with MMX™ technology 200 MHz
Cache Memory (second cache memory)		32 KB (256 KB)
EDO Memory (Expandable to)		32 MB (96 MB Max.)
Video Memory		2 MB
LCD	Type	14.5" (TFT)
	Displayed Colors	256/65536
	Tilt Angle	3° to 25°
Hard Disk Drive (including about 110 MB used specifically by the system)		4.3 GB*

* 1GB = 10⁹ bytes

● Other Specifications

Floppy Disk Drive		720 KB/1.44 MB (two-mode)	
CD-ROM Drive		10 x speed, Access time 250 ms.	
Slots	PC Card Slots	Two Type I or Type II, or one Type III CardBus / ZV Port (back slot) Compatible (Confirmation with the dealer required beforehand) ☞page 18	
		Allowable current (total for two slots)	3.3 V: 400 mA, 5 V: 400 mA, 12 V: 120 mA
	RAM Module Slot	144-pin, 3.3-V, SO-DIMM, 31.7 mm(1.25") or less ☞page 20	
Interface	Parallel Port	Dsub 25 pin female	
	Ext. Display Port	Mini Dsub 15 pin female	
	Serial Port	Dsub 9 pin male	
	Microphone Jack	Miniature jack, 3.5 DIA Input impedance 600 Ω, Input voltage range 0.01 Vp-p	
	Headphone Jack	Miniature jack, 3.5 DIA Impedance 32 Ω, Output Power 4 mW (Impedance 32 Ω) x 2	
	Audio-in Jack	Miniature jack, Stereo	
	Keyboard Jack	Mini DIN 6-pin female	
	Mouse Jack	Mini DIN 6-pin female	
Speaker		Stereo Speaker (built in)	
Sound		16 bits, 44.1 kHz PCM/FM sound (Sound Blaster PRO Compatible)	
Software	Operating System	Microsoft® Windows® 95 (FAT32 File System)	
	Utility Programs	Diagnostics program, PhoenixCard Manager95	
AC Adapter	Input	100 -240 V AC, 50 / 60 Hz	Output	15.0 V DC, 4.0 A
Power Consumption		Approx. 55 W** (Power Off: 1.2 W)	
Physical Dimensions (W x H x D)		364 mm X 392 mm X 209 mm (14.3" X 15.4" X 8.2")	
Weight		Approx. 6.6 kg (Approx. 14.6 lbs)	

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As an ENERGY STAR Partner, Panasonic has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Outline of the International ENERGY STAR Office Equipment Program

The international ENERGY STAR Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.